

WHAT IS CLAIMED IS:

1. A method for removing a predetermined region of a coating of a polymer-coated glass capillary tube, comprising the steps of:

raising a temperature in a reaction chamber in which the predetermined region of the polymer-coated glass capillary tube is arranged;

reacting the predetermined region of the glass capillary tube with a reactive gas containing O_3 gas introduced into the reaction chamber; and

discharging a product resulting from the reaction from the reaction chamber.

2. A method for removing predetermined regions of coatings of a plurality of polymer-coated glass capillary tubes, comprising the steps of:

raising a temperature in a reaction chamber, where the predetermined regions of the plurality of polymer-coated glass capillary tubes are arranged to form a plane and where the outer surfaces of the capillary tubes partially make gaps of 0.1 mm to 10 mm with the inner wall of the reaction chamber;

reacting the predetermined regions of the glass capillary tubes with a reactive gas containing O_3 gas introduced into the reaction chamber; and

discharging a product resulting from the reaction from the reaction chamber.

3. A method for removing a coating of a polymer-coated glass capillary tube according to claim 1, wherein the temperature in the reaction chamber is raised to 150°C to 400°C, and the reactive gas containing O₃ gas having a concentration of 0.5% to 10% by volume is supplied to the reaction chamber where the pressure in the reaction chamber is smaller than atmospheric pressure.

4. A method for removing a coating of a polymer-coated glass capillary tube according to claim 1, wherein the temperature in the reaction chamber is raised to 100°C to 400°C, the reactive gas containing O₃ gas having a concentration of 0.5% to 10% by volume is supplied to the reaction chamber where the pressure in the reaction chamber is smaller than atmospheric pressure, and ultraviolet ray is radiated to the reaction chamber.

5. A glass capillary comprising a first region where it is coated with a polymer of a generally constant thickness, a second region where a surface of the glass capillary being exposed for a predetermined length in the longitudinal direction, and a third region provided between the first and second regions, covered with a tapered polymer coating whose thickness becomes thinner from the first region to the second region, wherein a slope of the surface of the coating of the third region makes an angle of 70 degrees or less with the longitudinal direction of the capillary tube.